



University of Natural Resources and Life Sciences (BOKU) Vienna  
Department of Crop Sciences, Division of Plant Protection

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### **ABSTRACTS**

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# Experience of biological control of thrips pests (Thysanoptera: Thripidae) in a commercial greenhouse in Hungary

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**Abstract:** Polyphagous thrips as western flower thrips, *Frankliniella occidentalis* (Pergande) and onion thrips, *Thrips tabaci* Lindeman are both important pests in various ornamentals and vegetable crops in greenhouses throughout the world. Both species can cause serious economical losses by their direct damage and by transmitting the *Tomato spotted wilt virus* (TSWV). Both of these polyphagous thrips species frequently cause severe damage in many greenhouse crops in Hungary as well, especially in commercial sweet pepper, where the success of plant protection is based on the management of thrips. Chemical control is not always feasible because of ecological characteristics of these thrips species: thigmotactic behaviour, high reproductive capacity and tolerance to insecticides. The efficiency of thrips management in sweet pepper could be improved by using predatory arthropods like the predatory mite *Amblyseius swirskii* Athias-Henriot (Acari: Phytoseiidae) and the flower bug *Orius laevis* Fieber (Hemiptera: Anthocoridae). According to Blockmans *et al.* (2005) and Wimmer *et al.* (2008) *Amblyseius swirskii* is a promising control agent in biological control systems because it predate, reproduces and develops on western flower thrips and onion thrips as well, furthermore it can be released preventively when the crop is flowering and remains present in the crop throughout the entire growing season. A greenhouse trial was conducted in a commercial sweet pepper crop (*Capsicum annuum* cv. HÓ F1) at the Experimental and Research Farm, Faculty of Horticultural Science, Corvinus University of Budapest. The effectiveness of the predatory arthropods as biological control agents of *F. occidentalis* and *T. tabaci* in greenhouse conditions is discussed.

**Keywords:** biological control, greenhouse sweet pepper, *Amblyseius swirskii*, thrips

Blockmans, K., van Houten, Y. and Hoogerbrugge, H. (2005): Biological control of whiteflies and western flower thrips in greenhouse sweet peppers with the predatory mite *Amblyseius swirskii* Athias-Henriot (Acari: Phytoseiidae). Second International Symposium in Biological Control of Arthropods, 555-565.

Wimmer, D., Hoffmann, D. and Schausberger, P. (2008): Prey suitability of western flower thrips, *Frankliniella occidentalis*, and onion thrips, *Thrips tabaci*, for the predatory mite *Amblyseius swirskii*. Biocontrol Science and Technology, Vol. 18, No. 6, 541-550.